

## **REMARKS**

### **I. INTRODUCTORY REMARKS**

Applicants have carefully reviewed and considered the Examiner's Action mailed March 31, 2009. Reconsideration is respectfully requested in view of the foregoing amendments and the comments set forth below.

By this Amendment, claims 10-18 are currently amended and claim 19 is newly added. No new matter has been added. Accordingly, claims 10-19 are pending in the instant application. The Applicants thank the Examiner for the careful consideration of this application. Based on the following remarks, the Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

### **II. CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

#### **A. CLAIM 10**

Claims 10-18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner requests clarification regarding what the "at least one trench" would be between if the second vertical power component does not exist. By the foregoing amendments to the claims, Applicants have clarified the "the at least one trench" in claim 10 to be between "at least one first vertical power component" and "at least one lateral, active component." Accordingly, it is submitted that claims 10-18 are fully definite under 35 U.S.C. § 112, second paragraph, and withdrawal of this rejection is requested.

#### **B. NEW CLAIM 19**

Claim 19 is a new dependent claim added to cover the "optionally at least one second power component" feature canceled for clarification purposes in claim 10. Claim 19 is added

without the addition of new matter, with support from, for example, paragraph [0046] of the specification and Fig. 2.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103(A)**

Claims 10-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,909,626 to Kobayashi in view of U.S. Patent No. 5,294,825 to Nakagawa et al. (hereinafter referred to as “Nakagawa”). Claim 1 is allowable as no reasonable combination of Kobayashi and Nakagawa teaches or suggests a “trench extending from said **front side to said back side** of said silicon substrate.” (emphasis added).

Kobayashi discloses a SOI (silicone on insulator) substrate for integrating a vertical power element and a SOI layer. The substrate is built up by a first (1) and a second (4) substrate which are firmly coupled and form a single composite substrate (col. 6, lines 59-67 or col. 7, lines 19-21). The vertical-type power element forming region (see Fig. 3E, 4E, 5E) extends over the single composite substrate.

Referring to Kobayashi, the Office Action aligns the shallow step 2 with the claimed “trench extending from said **front side to said back side** of said silicon substrate.” However, the shallow step does not extend from the front side of a silicone substrate to the back side of a silicon substrate. Rather, the shallow step is extending parallel to the front side and back side of the composite substrate. As claimed, the “vertical power component” extends “from a front side to a back side of a silicon substrate.” Accordingly, from FIGs. 3A and 4E of Kobayashi, shown below, the orientation of the vertical-type power element forming region indicates the front side and back side of the composite substrate would be the top and bottom of the composite substrate, or vice versa. Furthermore, the shallow edge 2 of Kobayashi does not extend from one side to another side as the shallow edge 2 only extends partially across the substrate. Additionally, the

shallow edge 2 of Kobayashi could not extend completely across the substrate to extend from one side to another side as the shallow edge would then eliminate the vertical-type power element forming region.

Therefore, the shallow step is not “extending from said front side to said back side of said silicon substrate,” but instead extends parallel to the front side and back side of the composite substrate.

The secondary reference to Nakagawa discloses active lateral components between isolation material. However, Nakagawa does not provide the claimed “trench extending from said front side to said back side of said silicon substrate.” See, Nakagawa, FIGs. 1 and 2, item 11. Combining Kobayashi and Nakagawa does not lead to the semiconductor component according to the present invention as neither Kobayshi nor Nakagawa teach or suggest a “trench extending from said front side to said back side of the silicone substrate” as recited in claim 10. Thus, it is respectfully requested that the rejection under 35 U.S.C. §103(a) be withdrawn.

Accordingly, it is submitted that independent claim 10 and dependent claims 11-19 are patentable over any combination of the prior art of record. Consequently, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 10-19 is requested.

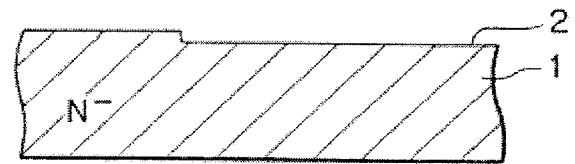


FIG. 3A

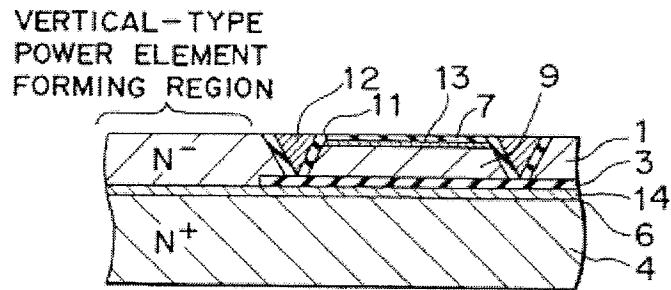


FIG. 4E

**CONCLUSION**

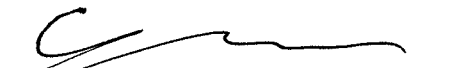
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants, therefore, respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Dated: 6/30/09

Respectfully submitted,

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